IN THE SPECIFICATION

Please delete the paragraph inserted at page 1, after line 5 in the Preliminary Amendment filed July 18, 2005, in its entirety and replace the paragraph at page 1, lines 6-10, with the following rewritten paragraph:

The subject application is a divisional of U.S. Application Serial No. 09/865,289 filed on May 29, 2001, now U.S. patent 6,634,017, the entire contents of which are hereby incorporated herein by reference, and is further related to subject matter disclosed in the Japanese Patent Applications No.Tokugan2001-027432 filed in February 2, 2001, to which the subject application claims priority under the Paris Convention and which is incorporated by reference herein.

Please replace the paragraph at page 6, lines 18-25, with the following rewritten paragraph:

A system LSI development apparatus 1 according to one embodiment of the present invention comprises: a setting file generating unit 2; a user defined module/user defined ~~instruction~~ command storage unit 3; a system LSI development environment generating unit 4; a performance evaluating unit 5; a termination judgment unit 6; a change item setting unit 7; an input/output interface unit 8; and a control unit 9, as shown in FIG. 1.

Please replace the paragraph at page 8, lines 20-26, with the following rewritten paragraph:

In addition, when a user ~~specify~~ specifies a system LSI design configuration by using a configuration specifying file, the user selects one value from among variable values defined in each of the storage units 23 to 26 contained in the setting file generating unit 2, and describes the selected value in the configuration specifying file as shown in FIG. 3.

Please replace the paragraph at page 9, lines 6-16, with the following rewritten paragraph:

The user can ~~do~~ perform the above configuration setting work interactively via the input/output interface unit 8. By setting a configuration interactively, the user can set a configuration easily without worrying about a configuration specifying file syntax or the like, and a time required for configuration setting can be reduced as compared with a case of directly describing the configuration in a file. Further, the user can set all of the items in a configuration interactively, [[,]] thus making it possible to prevent a mistake such that one item in a configuration ~~are~~ is left without setting.

Please replace the paragraph at page 10, lines 10-29, with the following rewritten paragraph:

A local memory map generating unit 22 generates a local memory map for each processor in the system LSI as shown in FIG. 4B, and stores the generated local memory map in a local memory map storage unit 26. Such a local memory map is generated by merging a global map information (memory area common to all processors. Refer to FIG. 4A, for example) specified from a configuration specifying file and local memory information on individual processors in a system LSI such as instruction memory, data memory, instruction cache and data cache. Here, local memory area information for each processor can be derived from memory size information specified in the configuration specifying file, and the local memory map for each processor is generated by inserting the local memory ~~are~~ area information into the reserved memory areas for each of the individual local memory ~~region~~ regions in the global map. In addition, shadow memory information on each processor may

be specified in advance in the global map, whereby each processor can ~~accessed~~ access ~~to~~ the local memory of another processor through a shadow memory area in the global map.

Please replace the paragraph at page 11, lines 22-23, with the following rewritten paragraph:

"Configuration of User defined Module/ User defined ~~Instruction~~ Command Storage Unit"

Please replace the paragraph beginning at page 11, line 24, through page 12, line 4, with the following rewritten paragraph:

A user defined module/ user defined ~~instruction~~ command storage unit 3 holds information concerning user defined hardware modules and user defined instructions in the instruction set of the processor in the system LSI. Here, it is desirable that information concerning the user defined hardware modules are described in RTL description 30 or behavior level description, and information concerning instructions' operation are described in C/C++ model ("C model" hereafter), and is stored in the storage unit 3. The behavior level description and C model description may be identical to each other. In addition, information 35 concerning the user defined instructions are specified in a configuration specifying file. It is desirable that the above information concerning user defined instructions is described and stored in an ISA definition file as shown in FIG. 4C.

Please replace the paragraph beginning at page 19, line 29, through page 20, line 12, with the following rewritten paragraph:

Specifically, as shown in FIG. 10, a machine instruction function declaration extracting unit 43c extracts a corresponding machine instruction function declaration from the user defined instructions stored in the user defined module/ user defined ~~instruction~~

command storage unit 3. In addition, a mergence processing unit 43d selects machine instruction function declarations that correspond to valid option instructions from the already defined template 43b by referring to the data stored in the option information storage unit 23. Then, the mergence processing unit 43d merges the machine instruction function declarations extracted from the template 43b and machine instruction function declaration extracting unit 43c, respectively, with each other, thereby generating a machine instruction function declaration header file. This machine instruction function declaration header file includes machine instruction function declarations that correspond to the optional instructions and user defined instructions that are valid in the configuration.

Please replace the paragraph at page 22, lines 11-31, with the following rewritten paragraph:

Although there is shown an example in which an application is described in C language, the system LSI development environment generating unit 4 can generate an assembler. Thus, the application may be described in an assembly language (or may be mixed in the C and assembly languages). In the case where an application is described in an assembly language, an object file is obtained as a result of assembling. In addition, an application program is allocated on a ROM, and thus, the sufficient ROM size depends on code size of the application program and data size of variables with its initial value. The ROM size is generally 2 to the "n"th power KB like 128 KB or 256 KB ("n" denotes a natural number). Thus, in the case where the code size is present at the boundary of the above, if a user ~~change~~ changes the application program so as to be able to be allocated in a ROM of its small size, the sufficient ROM size is reduced, resulting in cost reduction. For example, in the case where the code size is 130 KB, the ROM size is 256 KB. However, if

the application is modified so that the code size is 128 KB or less, the ROM size can be 128 KB, resulting in cost reduction.

Please replace the paragraph at page 27, lines 7-20, with the following rewritten paragraph:

The performance evaluating unit 5 can calculate a cache miss rate (or hit rate) by using the RTL description, compiler and verification environment generated by the system LSI development environment generating unit [[3]] 4. For example, the value as shown in FIG. 13C can be obtained as a result of estimation of cache performance relevant to a target application. As a result, in the case where there is no limitation to cache size and an attempt is made to reduce the execution time of the target application, 16 Kbytes that results in the lowest in cache miss rate can be set as cache size. In the case where there is limitation to cache size, tradeoff relevant to change of the execution time of a target application together with change of a cache miss rate is considered.

Please replace the paragraph at page 28, lines 30-33, with the following rewritten paragraph:

In the case where the target performance is not met, the change item setting unit [[5]] 7 derives the subsequent settings based on the evaluation result obtained by the performance evaluating unit 5.

Please replace the paragraph at page 34, lines 11-20, with the following rewritten paragraph:

In the following description, this example will be explained in details. In this case, an instruction is a machine instruction. Each instruction is executed in one cycle. The statistical

information is obtained for each function. The information about "hw_cycle" as commented ~~latter~~ later is interpreted during a simulator ~~is~~ operating. Namely, the statistical information is cleared to input values as specified by the user during the estimation. Evaluation of each function is initiated when called while new statistical information is obtained when returned.